

IN THE CLAIMS:

Please replace the heading at page 19, line 1, with --WHAT IS CLAIMED IS:--

Please cancel Claims 1-11 and add Claims 12-23.

--12. A method for isolating nucleic acids from a sample containing nucleic acids comprising

- A1
- (A) mixing, at a pH of 7 or less, the sample with a water-insoluble polymer that is not ionic in the basic and neutral range, is a bead polymer having an average particle size of from 3 to 100 μm , and consists of polymerized units of
- (a) 5 to 98% by weight of amino monomer,
 - (b) 0.3 to 30% by weight of crosslinker, and
 - (c) 0 to 93% by weight of vinyl monomer,
- thereby absorbing the nucleic acids,
- (B) separating the water-insoluble polymer on which is absorbed the nucleic acids, and
- (C) mixing the water-insoluble polymer with an aqueous phase with a pH of greater than 7, thereby liberating the adsorbed nucleic acids.
- Sub B4

13. A method according to Claim 12 wherein the sample is a biological material that is lysed after step (A).

14. A method according to Claim 12 wherein the polymer is
- (1) a water-insoluble, macroporous bead polymer that has an average particle size of from 3 to 100 μm and a specific surface area measured by the BET method of from 5 to 500 m^2/g and consists of polymerized units of
- (a) 5 to 98% by weight of amino monomer,
 - (b) 0.3 to 30% by weight of crosslinker, and
 - (c1) 0 to 93% by weight of hydrophobic vinyl monomer, or
- (2) a bead polymer that is able to swell in water well, has an average particle size of from 3 to 100 μm , and consists of polymerized units of

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CONT.
- (a) 5 to 79.5% by weight of amino monomer,
 - (b) 0.3 to 10% by weight of crosslinker, and
 - (c2) 10 to 93% by weight of hydrophilic vinyl monomer.

15. A method according to Claim 12 wherein the polymer is

- (1) a water-insoluble, macroporous bead polymer that has an average particle size of from 3 to 100 μm , a pore diameter of from 10 to 1000 nm, and a specific surface area measured by the BET method of from 5 to 500 m^2/g and consists of polymerized units of

- (a) 5 to 98% by weight of amino monomer,
- (b) 2 to 30% by weight of crosslinker, and
- (c1) 0 to 93% by weight of hydrophobic vinyl monomer, or

- (2) a bead polymer that is insoluble in water but swellable in water, has an average particle size of from 3 to 100 μm , and consists of polymerized units of

- (a) 5 to 79.5% by weight of amino monomer,
- (b) 0.3 to 10% by weight of crosslinker, and
- (c2) 10 to 93% by weight of hydrophilic vinyl monomer.

16. A water-insoluble, macroporous bead polymer that has an average particle size of from 3 to 100 μm , a pore diameter of from 10 to 1000 nm, and a specific surface area measured by the BET method of from 5 to 500 m^2/g and consists of polymerized units of

- (a) 5 to 98% by weight of amino monomer,
- (b) 2 to 30% by weight of crosslinker, and
- (c1) 0 to 93% by weight of hydrophobic vinyl monomer.

17. A bead polymer that is insoluble in water but swellable in water, has an average particle size of from 3 to 100 μm , and consists of polymerized units of

- (a) 5 to 79.5% by weight of amino monomer,
- (b) 0.3 to 10% by weight of crosslinker, and
- (c2) 10 to 93% by weight of hydrophilic vinyl monomer.

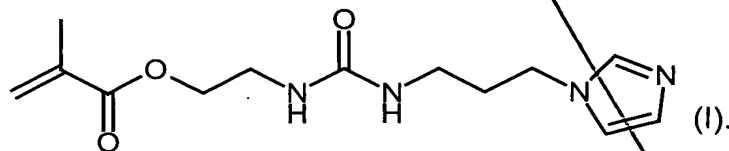
18. A method for preparing water-insoluble, macroporous bead polymers that have an average particle size of from 3 to 100 μm , a pore diameter of from 10 to 1000 nm, and a specific surface area measured by the BET method of from 5 to 500 m^2/g comprising

- (1) dispersing, in an aqueous medium using a protective colloid, a mixture of
- (a) 5 to 98 parts by weight of amino monomer,
 - (b) 2 to 30 parts by weight of crosslinker,
 - (c1) 0 to 93 parts by weight of hydrophobic vinyl monomer,
 - (d) 10 to 150 parts by weight of porogen, and
 - (e) 0.1 to 2.5 parts by weight of free-radical former,
- (2) polymerizing the resulting dispersion by heating to the decomposition temperature of the free-radical former, and
- (3) thereafter removing the porogen by extraction and/or evaporation.

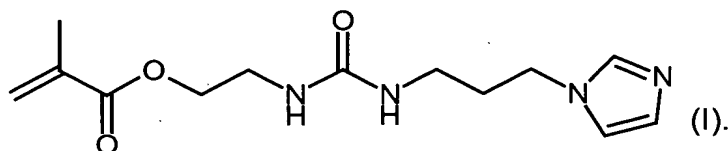
19. A method for preparing bead polymers that are insoluble but swellable in water and have an average particle size of from 3 to 100 μm comprising

- (1) dispersing, in an aqueous medium using a protective colloid, a mixture of
- (a) 5 to 79.7% by weight of amino monomer,
 - (b) 0.3 to 10% by weight of crosslinker,
 - (c2) 10 to 93% by weight of hydrophilic vinyl monomer,
 - (d) 10 to 150 parts by weight of solvent, and
 - (e) 0.1 to 2.5 parts by weight of free-radical former
- (2) polymerizing the resulting dispersion by heating to the decomposition temperature of the free-radical former, and
- (3) thereafter removing the porogen by extraction and/or evaporation.

20. A method according to Claim 12 wherein the amino monomer is a compound of formula (I)



21. An amino monomer of formula (I)



22. A method for preparing the amino monomer of Claim 21 comprising reacting 2-isocyanatoethyl methacrylate with 3-aminopropylimidazole.

23. A composition for isolating nucleic acids from a sample from a sample containing nucleic acids comprising

- (1) water-insoluble macroporous bead polymers that have an average particle size of from 3 to 100 μm , a pore diameter of from 10 to 1000 nm, and a specific surface area measured by the BET method of from 5 to 500 m^2/g and consist of polymerized units of
- (a) 5 to 98% by weight of amino monomer,
 - (b) 2 to 30% by weight of crosslinker, and
 - (c1) 0 to 93% by weight of hydrophobic vinyl monomer, or
- (2) bead polymers that are insoluble but swellable in water, have an average particle size of from 3 to 100 μm , and consist of polymerized units of
- (a) 5 to 79.5% by weight of amino monomer,
 - (b) 0.3 to 10% by weight of crosslinker, and
 - (c2) 10 to 93% by weight of hydrophilic vinyl monomer.--

IN THE ABSTRACT:

Please add an Abstract as new page 24 to read as follows:

--WO 00/49031

PCT/EP00/01028

- 24 -

METHOD FOR ISOLATING NUCLEIC ACIDS

ABSTRACT OF THE DISCLOSURE

The invention relates to a method for isolating nucleic acids from a sample containing nucleic acids by

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- A2
- (A) mixing, at a pH of 7 or less, the sample with a water-insoluble polymer that is not ionic in the basic and neutral range, is a bead polymer having an average particle size of from 3 to 100 μm , and consists of polymerized units of
- (a) 5 to 98% by weight of amino monomer,
 - (b) 0.3 to 30% by weight of crosslinker, and
 - (c) 0 to 93% by weight of vinyl monomer,
- thereby absorbing the nucleic acids,
- (B) separating the water-insoluble polymer on which is absorbed the nucleic acids, and
- (C) mixing the water-insoluble polymer with an aqueous phase with a pH of greater than 7, thereby liberating the adsorbed nucleic acids.
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